

ACCELERATED ETCHING OF CHROMIUM

Abstract of the Disclosure

0051456-022900
002220-9254560

A method and associated structure for increasing the rate at which a chromium volume is etched when the chromium body is contacted by an acid solution such as hydrochloric acid. The etch rate is increased by a metallic or steel body in continuous electrical contact with the chromium volume, both of which are in continuous contact with the acid solution. At a temperature between about 21 °C and about 52 °C, and a hydrochloric acid concentration (molarity) between about 1.2 M and about 2.4 M, the etch rate is at least a factor of about two greater than an etch rate that would occur in an absence of the steel body. In one embodiment, the chromium volume is a chromium layer that rests upon a conductive layer that includes a metal such as copper, wherein the acid solution is not in contact with the conductive layer. In another embodiment, the chromium volume is a chromium layer located under a conductive layer that includes a metal such as copper, wherein the steel body and the acid solution both contact the chromium layer through an opening in the conductive layer such that the opening exposes the chromium layer.